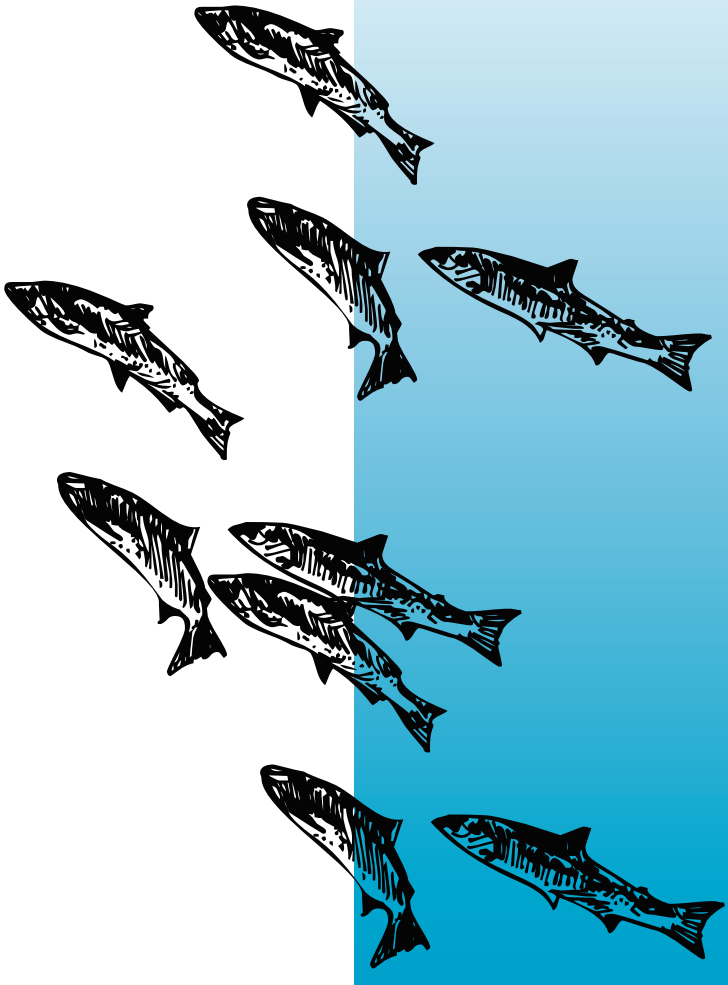
Agency Determination of Preferred Alternative



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5.0 IDENTIFICATION OF THE ENVIRONMENTALLY PREFERABLE AND AGENCY PREFERRED ALTERNATIVES

Section 5 describes the Environmentally Preferable Alternative, the agency's Preferred Alternative, and the primary factors in NMFS' decision concerning the Agency Preferred Alternative. CEQ Regulations (§1502.14[e]) require that the NEPA lead agency "Identify the [agency's] preferred alternative or alternatives, if one or more exists, in the draft [environmental impact] statement…unless another law prohibits the expression of such a preference." CEQ Regulations do not require that the Environmentally Preferable Alternative be identified in the Draft Environmental Impact Statement (§1505.2[b]), but rather in the Record of Decision based, in part, on the Final Environmental Impact Statement. However, both the agency's Preferred Alternative and the Environmentally Preferable Alternative are presented here in order to provide the public with information as early in the environmental review and decision-making process as possible. The Environmentally Preferable Alternative can be the same as the agency Preferred Alternative or differ in some respects, depending on the EIS analysis.

This section builds on the impact analysis of the individual options and alternatives presented in Section 4, Environmental Consequences. Subsection 5.1 summarizes the impacts described in Section 4 in tabular form. Subsection 5.2 then describes how those impacts were analyzed to identify the Environmentally Preferred Alternative and the NMFS Preferred Alternative.

5.1 Impacts Summary

Four alternatives have been analyzed in detail in the Environmental Impact Statement. The alternatives selected for detailed analysis represent different management frameworks from which to develop annual fishing regimes. Except for Alternative 4 (No Action/No Authorized Take), each alternative would provide a flexible framework for managing fisheries to meet conservation and use objectives. Each year, the co-managers would use the framework to develop annual fishing regimes for Puget Sound fisheries that are responsive to the year-specific circumstances related to the status of populations and other resource use objectives. Each alternative represents a distinctly different approach to setting management objectives, and each would have different outcomes in terms of escapement levels, harvest-related mortality, long-term resource protection, and harvest opportunity. The differences among the alternatives arise from 1) the type of management framework, and 2) the geographic scope of the fisheries. A more detailed description of each of the alternatives is provided in Section 2, Alternatives Including the Proposed Action. The predicted outcomes from implementing

each of the alternatives are described in Section 4 of this Environmental Impact Statement, and summarized in Table 5.1-1 below.

Each alternative was evaluated for four scenarios that captured the general range in magnitude of abundance and the level of Puget Sound chinook salmon harvest in Canadian and Alaskan fisheries (Table 5.1-2) that is reasonably expected to occur across the duration of the Proposed Action (the 2004–2009 fishing seasons), in order to capture the range of anticipated impacts of the Proposed Action and its alternatives. A more detailed discussion of the basis for and choice of these scenarios is presented in Subsection 4.2, Basis for Comparison of Alternatives and Approach to Alternatives Analysis.

Table 5.1-1. Abundance and Canadian/Alaskan fishery scenarios evaluated for each alternative.

Scenario	Abundance	Canadian/Alaskan Fisheries
Scenario A	2003 Puget Sound abundance	2003 Canadian/Alaskan fisheries harvest
Scenario B	2003 Puget Sound abundance	High Canadian/Alaskan fisheries harvest
Scenario C	30% reduction from 2003 abundance	2003 Canadian/Alaskan fisheries harvest
Scenario D	30% reduction from 2003 abundance	High Alaskan/Canadian fisheries harvest

The indications of a plateau or potential reduction in marine survival and expectations that Canadian fisheries will continue to increase as they have in recent years led the Interdisciplinary Team to conclude that Scenario B is the *most likely* to occur during the implementation of the Proposed Action. Therefore, the results in Table 5.1-1 are presented for Scenario B. However, the other scenarios follow the same general pattern of impacts when comparing the alternatives as they relate to each resource.

To evaluate the effect of the various alternatives on listed and unlisted salmonids, NMFS compared the predicted impacts against several standards for assessing the effects of fishing actions on the sustainability of salmon populations. For listed Puget Sound salmonids, these standards are Rebuilding Exploitation Rates (RER), critical escapement thresholds (CETs), and/or viable escapement thresholds (VETs), as described in Subsection 4.3.1, Threatened and Endangered Fish Species: Environmental Consequences. For unlisted salmonids (coho, pink, chum, sockeye and steelhead), the standards are exploitation rate ceilings, or escapement goals established by the co-managers beginning with the 2001 management year (see Subsection 4.3.2, Unlisted Salmonid Species: Environmental Consequences), intended to optimize population production.

Fishing regimes that provide for harvest rates at or below the RER level, by definition, do not cause appreciable harm to the population or pose jeopardy to the ESU. Fishing regimes above the RERs may

also not pose jeopardy to the ESU depending on the status and distribution of the chinook salmon populations throughout the ESU. The critical escapement threshold represents a point of biological instability, below which the risk of extinction increases significantly, due to declining spawning success, depensatory mortality, or risk of loss of genetic integrity. Viable escapement thresholds (in the context of this EIS analysis) are a level of spawning escapement associated with rebuilding to recovery, consistent with current environmental conditions. For most populations, VETs are well below the escapement levels associated with recovery, but achieving these goals under current conditions is a necessary step to eventual recovery when habitat and other conditions are more favorable.

In general, the farther the anticipated escapement is from the critical threshold, the less stable the populations, and the closer the anticipated escapement to the viable or optimal production threshold, the greater the confidence that the population will be sustainable over the long term. However, the status of the population and the change in resulting escapement among the four alternatives must be considered in the context of the environment of each population. In reality, alternatives in which modeling results indicate that some populations would just achieve their critical escapement thresholds may not perform any better than alternatives where those same populations are predicted to return just under their critical escapement thresholds. Conversely, substantial increases in spawning escapements may not result in commensurate increases in the progeny of those chinook salmon spawners. Salmon productivity is generally thought to increase over a range of escapement, then reach a plateau or decline at higher levels of escapement due to density-dependent survival; i.e., too many spawners for the available habitat, or too many juvenile salmon for the available food in the river.

Table 5.1-2 Comparison of predicted environmental effects among alternatives and a description of the Proposed Action for Scenario B in the order they appear in the EIS.

Environmental Components	Alternative 1 – Proposed Action/Status Quo	Alternative 2 – Escapement Goal Management, Management Unit Level	Alternative 3 – Escapement Goal Management, Population Level, Terminal Fisheries	Alternative 4 – No Action/No Authorized Take of Listed Puget Sound Chinook
Fish		No to low beneficial impacts to most populations relative to Alternative 1.	Beneficial impacts to most populations relative to Alternative 1.	Beneficial impacts to most populations relative to Alternative 1.
Threatened and Endangered Species	Meets 5 of 10 RERs. Exceeds 5 RERs by 4 to 10%.	Meets 5 of 10 RERs. Exceeds 5 RERs by 3 to 43%.	Meets 8 of 10 RERs. Exceeds 2 RERs by 2 to 7%.	Meets 9 of 10 RERs. Exceeds 1 RER by 7%.
	Exceeds 21 of 22 critical escapement thresholds by 2 to 1110%; average 383%.	Meets or exceeds 20 of 22 critical escapement thresholds by 15 to 1110%; average 364%.	Meets or exceeds 21 of 22 critical escapement thresholds by 15 to 1110%; average 378%.	Meets or exceeds 21 of 22 critical escapement thresholds by 15 to 1531%; average 547%.
	Meets or exceeds 9 of 19 viable escapement thresholds by 2 to 237%; average 68% (see Subsection 4.3.1.1).	Meets or exceeds 9 of 19 viable escapement thresholds by 0 to 105%; average 33% (see Subsection 4.3.1.2).	Meets or exceeds 10 of 19 viable escapement thresholds by 0 to 105%; average 57% (ee Subsection 4.3.1.3).	Meets or exceeds 11 of 19 viable escapement thresholds by 9-261%; average 107% (ee Subsection 4.3.1.4).
	NMFS has published a proposed determination for public comment that finds Alternative 1 meets the criteria of Limit 6 of the 4(d) Rule.			
	Exploitation rate management more robust to escapement goal management to uncertainty in survival and management error (see Subsection 4.3.8).	Escapement goal management less robust than exploitation rate management to uncertainty in survival and management error (see Subsection 4.3.8).	Escapement goal management less robust than exploitation rate management to uncertainty in survival and management error (see Subsection 4.3.8).	

Environmental Components	Alternative 1 – Proposed Action/Status Quo	Alternative 2 – Escapement Goal Management, Management Unit Level	Alternative 3 – Escapement Goal Management, Population Level, Terminal Fisheries	Alternative 4 – No Action/No Authorized Take of Listed Puget Sound Chinook
Unlisted Salmonids	At or below all exploitation rate ceilings by 13 to 27%. Meets or exceeds 11of 15 escapement goals across all non-chinook salmon species by 6 to 294%. Risk of density-dependent effects (ee Subsection 4.3.2.1).	Exploitation rates are low to substantially less than Alternative 1 (8 to 37%). Meets or exceeds 11 of 15 escapement goals across all non-chinook salmon species by 15 to 521%. Low to substantial beneficial effect to escapement depending on species, but increased risk of density-dependent declines in productivity (see Subsection 4.3.2.2).	Exploitation rates are low to substantially less than Alternative 1 (8 to 37%). Meets or exceeds 11 of 15 escapement goals across all non-chinook salmon species by 15 to 521%. Low to substantial beneficial effect to escapement depending on species, but increased risk of density-dependent declines in productivity (see Subsection 4.3.2.3).	Exploitation rates are low to substantially less than Alternative 1 (8 to 49%). Meets or exceeds 11 of 15 escapement goals across all non-chinook salmon species by 15 to 586%. Low to substantial beneficial effect to escapement depending on species, but increased risk of densitydependent declines in productivity (see Subsection 4.3.2.4).
Non-Salmonids	Adverse impacts from sport fisheries. Commercial catch unknown (see Subsection 4.3.3).	Substantial beneficial effect compared with Alternative 1 since no catch of groundfish and forage species. However, increased predation on forage species from reduced catch of salmon likely to reduce beneficial effects on forage species (see Subsection 4.3.3).	Substantial beneficial effect compared with Alternative 1 since no catch of groundfish and forage species. However, increased predation on forage species from reduced catch of salmon likely to reduce beneficial effects on forage species (see Subsection 4.3.3).	Substantial beneficial effect since no catch of groundfish and forage species compared with Alternative 1. However, increased predation on forage species from reduced catch of salmon likely to reduce beneficial effects on forage species (see Subsection 4.3.3).
Fish Habitat Affected by Fishing	No adverse impact to fish habitat (see Subsection 4.3.4).	Moderate adverse impact to fish habitat in freshwater areas compared to Alternative 1 (see Subsection 4.3.4).	Moderate adverse impact to fish habitat in freshwater areas compared to Alternative 1 (see Subsection 4.3.4).	Low beneficial impact to fish habitat compared to Alternative 1 (see Subsection 4.3.4).

Environmental Components	Alternative 1 – Proposed Action/Status Quo	Alternative 2 – Escapement Goal Management, Management Unit Level	Alternative 3 – Escapement Goal Management, Population Level, Terminal Fisheries	Alternative 4 – No Action/No Authorized Take of Listed Puget Sound Chinook
Marine-Derived Nutrients	Effects cannot be estimated due to variability in spawner density (which varies greatly between species and in different reaches of the rivers), and environmental factors (see Subsection 4.3.5.1).	Effects cannot be estimated due to variability in spawner density (which varies greatly between species and in different reaches of the rivers), and environmental factors (see Subsection 4.3.5.2.	Effects cannot be estimated due to variability in spawner density (which varies greatly between species and in different reaches of the rivers), and environmental factors (see Subsection 4.3.5.3).	Effects cannot be estimated due to variability in spawner density (which varies greatly between species and in different reaches of the rivers), and environmental factors (see Subsection 4.3.5.4).
Selectivity Effects on Salmonids of Fishing	No to low adverse effects (see Subsection 4.3.6.1).	Due to uncertainty about the contrasting effects of decreased effects from the elimination of pre-terminal fishing and possible increased use of selective gears in terminal fisheries, it is not possible to predict effects of this alternative (see Subsection 4.3.6.2).	Due to uncertainty about the contrasting effects of decreased effects from the elimination of pre-terminal fishing and possible increased use of selective gears in terminal fisheries, it is not possible to predict effects of this alternative (see Subsection 4.3.6.3).	No to low beneficial effects compared to Alternative 1 (see Subsection 4.3.6.4).
Hatchery-Related Effects				
Straying	Low to moderate adverse impact (see Subsection 4.3.7).	Moderate to substantial adverse impacts (see Subsection 4.3.7).	Moderate to substantial adverse impacts (see Subsection 4.3.7).	Moderate to substantial adverse impacts (see section 4.3.7).
Overfishing	See effects under Fish, above.	See effects under Fish, above.	See effects under Fish, above.	See effects under Fish, above.

Environmental Components	Alternative 1 – Proposed Action/Status Quo	Alternative 2 – Escapement Goal Management, Management Unit Level	Alternative 3 – Escapement Goal Management, Population Level, Terminal Fisheries	Alternative 4 – No Action/No Authorized Take of Listed Puget Sound Chinook
Tribal Treaty Rights and Trust Responsibilities	No or low adverse effect (see Subsection 4.4).	Substantial adverse effect (see Subsection 4.4).	Substantial adverse effect (see Subsection 4.4).	Substantial adverse effect (see section 4.4)
Treaty Indian Ceremonial and Subsistence Uses	No adverse effects (see Subsection 4.5.1).	Substantial adverse effects (see Subsection 4.5.2).	Substantial adverse effects (see Subsection 4.5.3).	Substantial adverse effects (see section 4.5.4)
Economic Activity				
Commercial	Moderate beneficial effects (see Subsection 4.6.1.1).	Substantial adverse effects (see Subsection 4.6.2.2).	Substantial adverse effects (see Subsection 4.6.3.2).	Substantial adverse effects (see Subsection 4.6.4.2).
Sport	Moderate beneficial effects to all sport fishing sectors (see Subsection 4.6.1.1).	Substantial adverse effects to all marine sport fishing sectors. Substantial adverse to 2 of 3 freshwater regions. Low beneficial effect to freshwater sport fishing sectors in Hood Canal (see Subsection 4.6.2.2).	Substantial adverse effects to all marine sport fishing sectors. Substantial adverse to 2 of 3 freshwater regions. Low beneficial effect to freshwater sport fishing sectors in Hood Canal (see Subsection 4.6.3.2).	Substantial adverse effects to all marine and freshwater sport fishing sectors (see Subsection 4.6.4.2).
Local and Regional Economy	Moderate beneficial effects to local economies and low beneficial effect to regional economies (see Subsection 4.6.1.1).	Substantial adverse effects to local economies and low adverse effects to regional economies (see Subsection 4.6.2.2).	Substantial adverse effects to local economies and low adverse effects to regional economies (see Subsection 4.6.3.2).	Substantial adverse effects to local economies and low adverse effects to regional economies (see Subsection 4.6.4.2).
Environmental Justice	Low to no effect (see Subsection 4.7.1).	Disproportionate and substantial adverse effect (see Subsection 4.7.2).	Disproportionate and substantial adverse effect (see Subsection 4.7.3).	Disproportionate and substantial adverse effect (see Subsection 4.7.4).

Environmental Components	Alternative 1 – Proposed Action/Status Quo	Alternative 2 – Escapement Goal Management, Management Unit Level	Alternative 3 – Escapement Goal Management, Population Level, Terminal Fisheries	Alternative 4 – No Action/No Authorized Take of Listed Puget Sound Chinook
Wildlife				
Marine Birds	Low adverse effect (see Subsection 4.8.1.1).	Low beneficial effect compared with Alternative 1 (see Subsection 4.8.1.2).	Low beneficial effect compared with Alternative 1 (see Subsection 4.8.1.3).	Low beneficial effect compared with Alternative 1 (see Subsection 4.8.1.4).
Marine Mammals	Low adverse effect (see Subsection 4.8.2.1).	Low beneficial effect compared with Alternative 1 (see Subsection 4.8.2.2).	Low beneficial effect compared with Alternative 1 (see Subsection 4.8.2.3).	Low beneficial effect compared with Alternative 1 (see Subsection 4.8.2.4).
Benthic Invertebrates	No to low adverse effect (see Subsection 4.8.3.1).	No to low beneficial effect compared with Alternative 1 (see Subsection 4.8.3.2).	No to low beneficial effect compared with Alternative 1 (see Subsection 4.8.3.3).	No to low beneficial effect compared with Alternative 1 (see Subsection 4.8.3.4).
Threatened and Endangered Species	Low adverse effect (see Subsection 4.8.4.1).	Low beneficial effect compared with Alternative 1 (see Subsection 4.8.4.2).	Low beneficial effect compared with Alternative 1 (see Subsection 4.8.4.3).	Low beneficial effect compared with Alternative 1 (see Subsection 4.8.4.4).
Ownership and Land Use	No effect (see Subsection 4.9).	No effect (see Subsection 4.9).	No effect (see Subsection 4.9).	No effect (see Subsection 4.9).
Water Quality	No effect (see Subsection 4.10).	No effect (see Subsection 4.10).	No effect (see Subsection 4.10).	No effect (see Subsection 4.10).

5.2 Identification of the Environmentally Preferable and Agency Preferred Alternatives

CEQ Regulations (§1502.14[e]) require that the NEPA lead agency "Identify the [agency's] preferred alternative or alternatives, if one or more exists, in the draft [environmental impact] statement…unless another law prohibits the expression of such a preference." The Environmentally Preferable Alternative "ordinarily, means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural and natural resources" (CEQ, 1981: 40 Most Asked Questions, No. 6a). The Preferred Alternative is the alternative NMFS believes will best fulfill the purpose and need for the Proposed Action. As provided for in NEPA and the CEQ NEPA implementing regulations, the Preferred Alternative and the Environmentally Preferable Alternative need not be the same, and in the case of NMFS' decision on this Proposed Action, they are not. NMFS has the authority to take into account various other considerations in choosing its Preferred Alternative, including such factors as the agency's statutory mission and responsibilities and economic, environmental, technical, and social factors (CEQ, 1981: 40 Most Asked Questions, No. 4a).

Based on Table 5.1-2 above, the following factors weighed most heavily in NMFS' decision concerning the Agency Preferred Alternative and the Environmentally Preferable Alternative: 1) fish, and in particular the ESA-listed Puget Sound chinook salmon; 2) various levels of restriction on tribal treaty rights (from voluntary to mandated), and trust responsibilities and the subsequent effects thereon; 3) treaty Indian ceremonial and subsistence uses; 4) various levels of environmental justice effects on Puget Sound tribes; 5) stable or increasingly adverse economic impacts to fishing communities; 6) secondary effects of fishing resulting from interactions of hatchery salmon that escape fisheries with wild salmon (i.e., straying); and, 7) fishing-related impacts to fish habitat. For other resources evaluated in the Environmental Impact Statement (i.e., wildlife, ownership and land use, water quality), there were no or very small differences among the alternatives, or uncertainty in the outcome precluded assessment of the effect (e.g., marine-derived nutrients).

5.2.1 The Environmentally Preferable Alternative

Based on the comparison of effects presented in Table 5.1-2, Alternative 4 (No Action/No Authorized Take of Listed Puget Sound Chinook) is the Environmentally Preferable Alternative because it is estimated to have, among the four alternatives considered, the most beneficial or least adverse effect on biological resources in terms of effects on salmonids (listed and unlisted) and non-salmonids, fish habitat and wildlife. The primary difference would be in the reduction of fish caught and, for salmon, a corresponding increase in the probability of recovery and survival of individual salmon populations in

the Puget Sound Chinook Salmon ESU that may result from the reduction in harvest. Alternative 1 (the Proposed Action) and Alternative 4 are predicted to have less adverse effect on fish habitat than Alternative 2 or 3. Alternatives 2 through 4 are predicted to have a small beneficial effect on wildlife compared with Alternative 1.

With regard to effects on fish species, there would be some beneficial effect from the higher abundances predicted to result from Alternative 4, but it is difficult to determine how much difference in environmental benefit there would be for this resource between Alternative 4 and the Proposed Action. Habitat carrying capacity and productivity are limited in many salmon streams in Puget Sound (see Subsection 4.3.8, Indirect and Cumulative Effects), and escapements that return in excess of the capacity of these systems may create increased competition for mates, spawning and rearing area, food and other limited resources so that substantial increases in escapement may not translate into similar increases in subsequent returns. The same uncertainty exists regarding the potential effects of substantial increases in the number of coho and chum salmon hatchery adults in natural spawning areas, or increased predation by salmon on forage fishes that are predicted to occur under Alternative 4 when compared with Alternative 1. Potential increases in predation or competition for food resources could also negate benefits realized from increased abundance for either salmon or non-salmon species.

5.2.2 The Agency Preferred Alternative

Alternative 1, the Proposed Action, is the NMFS Preferred Alternative because NMFS believes this alternative would be most successful at balancing resource conservation, trust obligations to Native American tribes, promotion of sustainable fisheries, and prevention of lost economic potential associated with overfishing, declining species and degraded habitats. NMFS did not choose Alternative 4, the Environmentally Preferable Alternative, as its preferred alternative due to: 1) the substantial adverse impacts to tribal treaty rights, treaty Indian ceremonial and subsistence fishing uses, environmental justice effects, and economic effects on fishing communities predicted for this alternative; 2) the expected reduction in adverse biological impacts from implementation of Alternative 4 were not predicted to be substantial enough to outweigh the losses in these other areas, particularly for listed Puget Sound chinook salmon; and 3) failure to achieve the purpose and need for the Proposed Action. NMFS also did not select Alternatives 2 or 3 for the first two reasons described above.

NEPA regulations and guidance indicate that agencies have discretion in choosing a preferred alternative different from the environmentally preferred alternative "based on relevant factors including economic and technical considerations and agency statutory missions" (40 CFR 1505.2[b]). NMFS has three primary mandates with regard to this Proposed Action: 1) implement the ESA; 2) carry out

federal trust responsibilities with Native American tribes, including protecting the exercise of federally-recognized treaty tribal fishing rights and; 3) provide for sustainable fishing opportunity. In addition, Presidential Executive Orders require that NMFS minimize conflicts between its implementation of the ESA and exercise of tribal activities (E.O. 13175); e.g., treaty-reserved fishing rights, and fishing (E.O. 12962). The Secretarial Order (Department of Interior Order 3206) requires that any restrictions of tribal fishing under the ESA 1) be reasonable and necessary for the conservation of the species at issue; 2) occur only when the conservation purpose of the restriction cannot be achieved by reasonable regulation of non-Indian activities; 3) be the least-restrictive alternative available to achieve the conservation purpose; 4) not discriminate against Indian activities either as stated or implied; and 5) that voluntary tribal measures are not adequate to achieve the necessary conservation purpose. NMFS staff propose to conclude that Alternative 1 (the Proposed Action) would not appreciably reduce the likelihood of survival or recovery of listed Puget Sound chinook salmon[i]. Therefore, the further reductions in fisheries, and tribal fisheries specifically, that would occur with implementation of Alternative 2, 3, or 4 are not required to meet ESA requirements, and would represent an unreasonable and unnecessary constraint on the exercise of federally-recognized treaty fishing rights. In addition, the approach represented in Alternative 1 is more robust overall to management error and key uncertainties in environmental parameters (see Subsection 4.3.8, Fish: Indirect and Cumulative Effects), and therefore should better protect salmonid resources evaluated in the Environmental Impact Statement and better promote sustainable fishing opportunities.

Under the most likely scenario to occur over the duration of the Proposed Action (the 2004–2009 fishing seasons), implementation of Alternative 2, 3, or 4 is predicted to result in the loss of more than 94 percent of the local and regional sales, employment, and personal income generated by commercial salmon fishing associated with the Puget Sound fishery. Reductions in sport fishing-related economic activity would range from 12 to 72 percent (see Subsection 4.6, Economic Activity and Value: Environmental Consequences). These predicted effects would be most severe in communities dependent upon commercial and sport fishing activities. Combined with substantial declines in fishing industries that these communities have already experienced over the past 20 years, these predicted effects would further affect the character and viability of these communities, especially tribal communities (see Subsection 4.5, Treaty Indian Ceremonial and Subsistence Salmon Uses: Environmental Consequences; and Subsection 4.7, Environmental Justice: Environmental

[i] NMFS' Proposed 4(d) Evaluation and Determination for the Puget Sound chinook resource management plan is currently undergoing public comment and review.

Consequences). As discussed in 5.2.1 above, the primary basis for the identification of Alternative 4 as the Environmentally Preferred Alternative was the increased abundance in fish species. Alternative 4 (as well as Alternative 2 or 3) would provide for substantially larger escapements of salmonids, larger abundance of forage fish, and a slightly greater possibility of rebuilding some individual listed Puget Sound chinook populations more quickly. However, given the discussion above, it is unclear what realistic effect this would have on the status of salmonid populations. NMFS has tentatively concluded that Alternative 1 will meet ESA requirements. Management objectives for the other salmonid species are also predicted to be met. Since Alternative 1 also provides for the conservation needs of these resources, NMFS does not consider the predicted reduction in adverse biological impacts from the implementation of Alternative 4 substantial enough to outweigh the significant economic losses that would be prevented under Alternative 1.

Finally, NEPA regulations require that the selected alternative be consistent with the purpose and need for the Proposed Action (see Subsection 2.3, Alternatives Considered in Detail). Alternative 4 would be inconsistent with several elements of the purpose and need for the Proposed Action, and would not have been considered were it not one of the alternatives identified for analysis in the settlement agreement to Washington Trout v. Lohn. It would not: 1) provide for the meaningful exercise of federally-protected treaty fishing rights; 2) provide for tribal and non-tribal fishing opportunity co-managed under the jurisdiction of U.S. v. Washington; or 3) optimize harvest of abundance of Puget Sound salmon while protecting weaker commingled chinook salmon stocks.